

15.0 Natural Resources

15.1 Landscaping and Conservation

In support of national objectives for the beautification, conservation and optimum utilization of the natural resources of this country, SSC management has, through the U.S. Army Corps of Engineers, developed an effective Land Management Plan that is both workable and functional. This plan includes provisions for the orderly development and economic maintenance of recreational and historical areas, wildlife and forest management, and fire control of the forested areas.

15.1.1 Landscaping

On April 26, 1994, an Executive Memorandum (EM) from the President to Federal agencies addressed landscape management practices on federal landscaped grounds. The SSC Landscape Plan is designed to respond to that EM and to accomplish a three-fold purpose:

- Orderly, comprehensive site development to provide screening, noise buffering, soil conservation, and element control through the selective use of trees, shrubs, and grass
- Enhancement of the existing pine and pine-mixed hardwood forest terrain through preservation of the flora and fauna compatible with SSC functions
- Provision of an attractive setting for the enjoyment and appreciation of site personnel and visitors to the area

The humid subtropical climate and acid soil dictate, to a large extent, the plant ecology of the area. Though the types of natural vegetation at SSC are of considerable complexity and variation, it is possible to condense the flora into three extremely broad plant communities described below. The ages of dominant and associated species may vary considerably from one area to another within each plant community.

SLASH PINE FORESTS – These forests range from nearly pure stands of slash pine to communities dominated by slash pine but containing associated species such as longleaf pine, loblolly pine, sweetbay, tupelo, water oak, blackjack oak, black cherry, southern red oak, live oak, pond cypress, persimmon, holly, post oak and others.

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LONGLEAF PINE AND LOBLOLLY PINE FORESTS – Here loblolly pine or longleaf pine dominates but the plant community usually contains associated species of pine and hardwood such as slash pine, pond pine, water oak, tupelo, southern red oak, post oak, live oak, pond cypress, sweetbay, persimmon, and others.

TUPELO FORESTS – Within these plant communities, tupelo is the dominant species with associated species consisting of slash pine, loblolly pine, pond pine, sweetbay, pond cypress, red maple, water oak, southern red oak, sweetgum, and others.

Based on the EM, SSC environmental landscaping goals are to use regionally native plants; design, use, or promote construction practices that minimize adverse effects on the natural habitat; prevent pollution; implement water-efficient practices; and create outdoor demonstrations. To this end, any landscape design should adhere to the following guidelines:

- Complement existing and planned structures
- Emphasize a unified site pattern, help define traffic arteries and create an overall consistent unity in the choice of trees, shrubs, and lawns
- Contribute to safety at intersections and crossings
- Consider the ultimate in growth, form, size, and color of the plants selected, and the cultural requirements such as moisture, drainage, and maintenance
- Reforest for aesthetic and utility considerations
- Correlate design with utility lines, storm drains, and sewer systems
- Utilize native species

Benefits associated with implementation of the plan include the reduction in use of water, pesticides, and fertilizers. Also there will be a reduction in maintenance costs, an increase in erosion control, and utilization of hardy plants. By implementing the plan, SSC will promote regional identity and enhance wildlife habitat and biodiversity.

15.1.2 Conservation

The SSC Land Management Plan also includes various supplementary plans and recommendations for economic development and management of the resources available at SSC. These resources include forestry products, wildlife, recreation, and transportation.

The forestry resources represent an asset worthy of a management program to conserve and enhance. The Forestry Plan provides for such a program. Since most of the timber growing in the Fee Area was merchantable in 1975, greater emphasis should be given to this fact of SSC operations. The Forest Fire Control Plan prescribes controls for the prevention, prompt suppression, and minimization of forest fires occurring at SSC.

An abundance of wildlife within SSC contributes to the need for the Wildlife Management Plan to conserve and ensure propagation of the numerous species of animal, fowl, and fish. This plan provides the guidelines, techniques, and practices to be followed in managing this resource consistent with the NASA-assigned mission at this facility.

Since SSC is located within a very old and relatively untouched area rich in historical significance and abundant in unique, interesting folklore, its potential as a recreational resource is almost unlimited. The Recreation Plan outlines the orderly development and conservation of this natural resource. Two areas have been developed within the immediate vicinity as recommended in the Land Management Plan. The Galabank on the Jourdan River, recreational and natural area, and the historical, recreational, and natural area sites of old Gainesville, Mississippi are now functional.

The water transportation resource developed through dredging the East Pearl River from the Mississippi Sound to SSC and installing locks with an extensive man-made canal system has added an economic asset of inestimable value.

SSC conserves groundwater resources by using the Access Canal as the primary source of industrial water at the site. SSC is permitted by the State of Mississippi to withdraw water from the East Pearl River into the elevated portion of the Access Canal. Industrial water is used for deluge water for the test stands, cooling water, and fire control. Industrial water wells are maintained as a backup system for the surface water withdrawal system.

15.2 Major Environmental Considerations for Proposed Actions

All projects that involve landscape design or have the potential to affect current landscape, wildlife, forested areas, and recreational areas must be coordinated through NASA Environmental Management so that potential impacts can be properly assessed. Contact with NASA Environmental Management is encouraged to ensure that proposed actions comply with SSC's Land Management Plan and Landscape Plan. The Land Management Plan also includes various supplementary plans and recommendations for economic development and management of the resources available at SSC. These resources include forestry products, wildlife, recreation, and transportation.

15.3 References

NASA SSC Master Plan, 1997